U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2005-019-EA

CASEFILE/PROJECT NUMBER (optional): Grazing permits #051423 and #0500037

PROJECT NAME: Norell and Ducey Grazing Permit Renewals

LEGAL DESCRIPTION: Location of Proposed Action: Garfield County

Allotment			Legal Description		
No.:	**Name:**	**BLM Acres:**	**TWP (S):**	**RGE (W)**	**Section(s)/Lot(s) \or Portions of**
06025	Skinner Ridge	937	T4S	R99W	Sec 31, S1/2 Sec 32, SE1/4 Sec 33, S1/2, NE1/4

APPLICANT: Norell, Franklin D and Vicky, #051423; Alan and Crystal Ducey #0500037

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: Allotment Categorization- all White River Field Office (WRFO) grazing allotments have been placed in one of three management categories that define the intensity of management: (1) improve, (2) custodial and (3) maintain. These categories broadly define rangeland management objectives in response to an analysis of an allotment's resource characteristics, potential, opportunities, and needs. The intent of allotment categorization is to concentrate funding and on the ground management efforts on those allotments where actions are needed to improve the resources, or resolve serious resource conflicts. The improve category was identified in White River Resource Management Plan Record of Decision (ROD/RMP) for development of allotment management plans (AMPs). The AMPs will direct livestock management through decisions, such as: 1) grazing systems, 2) season of use, 3) number and kind of livestock; and 4) range developments or vegetation treatments.

The Skinner Ridge allotment was identified as a maintain allotment. However, because this relatively small allotment includes Public Land in riparian areas in both the Clear Creek and Brush Creek drainages and because the riparian areas are not in Proper Functioning Condition, there is an immediate need for more intensive management. In 2003 and 2004 a fencing project was completed which created a separate BLM pasture including the Clear Creek riparian area so

that this unit could be managed to improve riparian condition through fall, short duration grazing. This strategy will be incorporated into the grazing plan for this permit renewal

Proposed Action *(Alternative A)*: The proposed action would be the renewal of grazing permits # 051423 and #0500037 for a ten year period under an allotment management plan for the combined operations. The objectives of the Skinner Ridge Allotment Management Plan are:

- To improve the Clear Creek and Brush Creek riparian areas to Proper Functioning Condition (PFC).

- To maintain or enhance a healthy rangeland vegetation composition and species diversity, capable of supplying forage at a sustained yield to meet the current forage demands for livestock and wildlife.

- To provide for adequate forage plant growth and/or regrowth opportunity necessary to: 1) replenish plant food reserves; and 2) produce sufficient seed to meet the reproduction needs necessary to maintain a significant ecological presence in the plant community.

- To establish a grazing system wherein the permittee can use the allotments in his permit as pastures to graze the range with a strategy that provides for plant growth requirements and provides for the most economical use of all forage resources available to the ranch operation.

The key part of the management plan will be the grazing system the primary purpose of which is to provide a period of deferment of livestock grazing during the critical growing season (June 1-July 15) for the Skinner Ridge allotment. Implementation of this grazing management plan will insure that we continue to meet or exceed the Standards for Rangeland Health in the future. In addition, in order to return the Clear Creek riparian area to proper functioning condition, livestock grazing use of the Clear Creek pasture will be limited to 20 days in the fall or until utilization of herbaceous riparian/floodplain vegetation to a 4" stubble height is reached.

The proposed grazing system will provide deferment from grazing during the critical growth period on an alternate yearly basis for the Brush Creek pasture and yearly deferment for the Clear Creek pasture. The critical growth period for the Skinner Ridge allotment is defined as June 1 to July 20. The proposed grazing schedule is as follows:

YEAR 1 GRAZING SCHEDULE							
Allotment Number	**Allotment Name Pasture**	**Livestock Number**	**Kind**	**Date On**	**Date Off**	**% BLM**	**AUMs**
06025	Skinner Ridge, Brush Creek - Ducey	72	Cattle	07/01	08/15	54	59
06025	Skinner Ridge, Clear Creek- Norell	90	Cattle	09/20	10/10	100	60
YEAR 2 GRAZING SCHEDULE							

YEAR 1 GRAZING SCHEDULE							
Allotment Number	**Allotment Name Pasture**	**Livestock Number**	**Kind**	**Date On**	**Date Off**	**% BLM**	**AUMs**
Allotment Number	**Allotment Name**	**Livestock Number**	**Kind**	**Date On**	**Date Off**	**% BLM**	**AUMs**
06025	Skinner Ridge, Brush Creek- Ducey	72	Cattle	08/15	09/30	54	59
06025	Skinner Ridge, Clear Creek- Norell	90	Cattle	09/20	10/10	100	60

Alan Ducey will use the Brush Creek pasture starting July 1 through August 15 in year one. In year two he will use the Brush Creek pasture from August 15 through September 30. Norell's use in the Clear Creek pasture will be deferred every year until September 20 in order to hasten the progress of riparian recovery in Clear Creek. Norell's use will be no longer than 20 days on a yearly basis.

Continuation of Current Management *(Alternative B)*: This alternative would provide for renewal of the expiring permit with no changes made in livestock kind, numbers, season of use, or type of use (active, suspended, nonuse). Livestock grazing use would continue as permitted based upon the following schedule:

Allotment Number	Allotment Name	Livestock Number	Kind	Date On	Date Off	% BLM	AUMs
06025	Skinner Ridge, Ducey	69	Cattle	6/17	10/31	35	109
06025	Skinner Ridge, Norell	100	Cattle	6/17	10/31	25	108

Alternative C (*No Grazing):* The no grazing alternative consists of not issuing a grazing permit for livestock use. There would be no livestock grazing on public lands within the Skinner Ridge allotment on which it is currently permitted.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: BLM grazing permits #051423 and #0500037 which authorize grazing on the Skinner Ridge allotment (06025) expired on February 28, 2005. In the interim period while this analysis is being prepared and reviewed, these permits have been renewed under the FY 2004 Congressional Appropriations rider. These permits are subject to renewal at the discretion of the Secretary of the Interior for a period of up to ten years. The Bureau of Land Management has the authority to renew livestock grazing permits/leases in accordance with the provisions of the Taylor Grazing Act, the Public Rangeland Improvement Act, the Federal Land Policy and Management Act and the White River Resource Area Resource Management Plan/Environmental Impact Statement as amended by the Standards for Public Land Health in Colorado.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-22 through 2-26

Decision Language: With minor exceptions, livestock grazing will be managed as described in the 1981 Rangeland Program Summary (RPS). That document is the Record of Decision for the 1981 White River Grazing Management Final Environmental Impact Statement (Grazing EIS).

COMPLIANCE WITH SECTION 302 OF FLPMA RELATIVE TO THE COMB WASH GRAZING DECISION

A review of applicable planning documents and a thoughtful consideration of the new issues and new demands for the use of the public lands involved with these allotments have been made. This analysis concludes that the current multiple use allocation of resources is appropriate.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. The following table summarizes the assessment of each public land health standard for each allotment. Specific findings for each standard are located in the critical elements section below.

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	**Achieving or Moving Towards Achieving**	**Not Achieving**	**Causative Factors**	**Achieving or Moving Towards Achieving**	**Not Achieving**	**Achieving or Moving Towards Achieving**	**Not Achieving**
#1-Upland Soils							
06025	843 acres	95 acres	Noxious Weeds - Houndstongue	938 acres	0 acres	843 acres	95 acres

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	**Achieving or Moving Towards Achieving**	**Not Achieving**	**Causative Factors**	**Achieving or Moving Towards Achieving**	**Not Achieving**	**Achieving or Moving Towards Achieving**	**Not Achieving**
#2-Riparian Systems							
06025	0 miles	7/8 mi	Grazing practices	7/8 miles	0 miles	7/8 miles	0 miles
#3-Plant Communities							
06025	843 acres	95 acres	Noxious Weeds-Houndstongue	938 acres	0 acres	843 acres	95 acres
#3-Animal Communities							
06025	843 acres	95 acres	Noxious weeds in uplands and channels	938 acres	0 acres	<843 acres	>95 acres
#4-Special Status, T&E Species							
06025	843 acres	95 acres	Noxious weeds in uplands and channels	938 acres	0 acres	<843 acres	>95 acres
#5-Water Quality							
06025	843 acres	95 acres	Grazing practices	938 acres	0 acres	938 acres	0 acres

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River RA has been designated as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed grazing permit renewal is not located within a 20 mile radius of any special designated air-sheds or non-attainment areas. The air quality criteria pollutant likely to be most affected by the proposed actions is the level of inhalable particulate matter, specifically particles ten microns or less in diameter associated with fugitive dust. No air quality monitoring data is available for the Skinner Ridge allotment. However, it is apparent that current air quality near the proposed location is good because the Colorado Air Pollution Control Division (APCD, 2005) estimates the maximum PM_{10} levels (24-hour average) in rural portions of western Colorado like the Piceance Basin to be near 50 micrograms per cubic meter ($\mu g/m^3$). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM_{10} (24-hour average) of 150 $\mu g/m^3$.

Environmental Consequences of the Proposed Action: The proposed action calls for deferment of livestock grazing during the critical growing season (June 1 to July 20). The new

grazing management plan will result in 54% AUM reduction on the Brush Creek pasture and 56% AUM reduction on the Clear Creek pasture. Successful implementation of the new grazing management plan will result in increased ground cover in the form of litter and live plant material. Increased ground cover will protect soils from eolian processes minimizing production of fugitive dust and associated particulate matter (PM_{10}).

Environmental Consequences of the Alternative B: Under the current grazing management plan livestock would continue to graze both pastures through critical growing seasons reducing effective ground cover. Reductions in ground cover will leave soils exposed to eolian processes increasing the potential production of PM_{10} from fugitive dust. Potential impacts detrimental to air quality are more likely to occur under the current grazing management plan than under the proposed grazing management plan.

Environmental Consequences of the Alternative C: No adverse impacts to air quality will result from alternative C (no grazing alternative).

Mitigation: None

CULTURAL RESOURCES

Affected Environment: A Class I literature review was conducted by BLM White River Field Office Archaeologist through the Colorado Office of Archaeology and Historic Preservation (OAHP), Denver, Colorado and at the Bureau of Land Management, White River Field Office in Meeker, Colorado in the Fall of 2005. Site and survey files were reviewed for information regarding previous cultural resource inventory projects and previously documented sites on the allotment. The results of the review indicated that no sites have been previously recorded on the allotment. The literature search also included a review of the 1883 and 1907 (resurvey) General Land Office (GLO) maps. No historic sites were identified on the GLO maps of the allotment area. Based on this review it was anticipated that site density would be low. Prehistoric sites and isolates, historic Ute, and historic sites related to livestock grazing were anticipated, particularly in the pinyon-juniper woodlands. A Class III inventory was completed by the Archaeologists walking 10 m (33 feet) transects on random portions of the allotment. The random survey was mapped with a Trimble GeoExplorer Global Positioning System (GPS) unit. The survey revealed no archaeological data with the potential for yielding information significant to the history of the region and is not recommended as eligible to the National Historic Register.

Environmental Consequences of the Proposed Action: There will be no new impacts to cultural resources under the Proposed Action.

Environmental Consequences of the Alternative B; here will be no new impacts to cultural resources under Alternative B.

Environmental Consequences of the No Action Alternative: There will be no new impacts to Cultural resources under the No Action Alternative.

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places
- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- A timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The noxious weed houndstongue (*Cynoglossum officinale*) occurs on 200 acres of BLM lands within the Skinner Ridge allotment. In 2004, a cooperative weed management project with the permittees to reduce houndstongue on both BLM and private lands within the allotment was initiated. This project was expanded to include the contiguous Square S Summer Range and its lands of assorted ownerships.

Environmental Consequences of the Proposed Action: In reference to houndstongue, the proposed action, a managed grazing scheme wherein pastures within the allotment receive growing season rest and deferment, has the best potential to maximize vigor of the grass component of the various ecological sites involved. While houndstongue may readily invade early and mid seral ecological sites, the rate and extent of invasion would be much less for late seral rangelands with a vigorous, competitive compliment of perennial grasses and forbs.

Environmental Consequences of Alternative B: Continuous summer long grazing use, particularly in the drainages on either side of Skinner Ridge has reduced both the vigor and

extent of desirable perennial herbaceous species which would largely prevent houndstongue invasion and proliferation. Not changing the grazing management scheme will maintain the existing potential for houndstongue growth and proliferation, although there would continue to be BLM/ permittee houndstongue control. This would likely mean that there would be no further expansion of the houndstongue infested acreage.

Environmental Consequences of Alternative C: Under this alternative, the density and distribution of houndstongue could be expected to increase, primarily because there would be no permittee commitment to control noxious weeds.

Mitigation: Continue the cooperative effort to control/reduce houndstongue on the Skinner Ridge allotment.

MIGRATORY BIRDS

Affected Environment: There are a number of migratory birds of higher conservation interest (PIF and USFWS lists) that nest in or near the Skinner Ridge allotment from May through mid August. Those species associated with the allotment's ~115 acres of aspen/riparian habitat (primarily the Clear Creek pasture) include: red-naped sapsucker, violet-green swallow, flammulated owl, Cordilleran flycatcher, and MacGillivray's warbler. A small nesting colony of purple martin has occupied similar stands of aspen about 1 mile north of the allotment since at least 1996. Nearly 90% of the permit area is composed of mountain big sagebrush communities that vary in character in response to slope. These 800+ acres of sage-steppe communities support the higher interest species Brewer's sparrow, green-tailed towhee and northern harrier. These and other breeding migratory birds appear in their respective habitats at appropriate densities with no widespread lapses in composition or distribution.

Environmental Consequences of the Proposed Action: The proposed action would reduce the extent and duration of livestock use synchronous with the migratory bird nesting season from ~4 weeks every year (mid-June through mid-July) across ~600 acres to ~2 weeks in alternate years (first half of July) on ~200 acres (about a 92% reduction in acre-days use). Livestock would not enter the Brush Creek pasture until mid-August, well after the nest season, and in alternate years, use the allotment beginning 1 July—late in the nesting season when the majority of nesting attempts would be completed before substantive reductions in ground cover were realized. Use of the Clear Creek pasture would begin in mid-September and would involve no nesting season use. It is likely that proposed livestock grazing use, primarily on sage-steppe habitats within the Brush Creek pasture, would have little direct inhibitory effect (i.e., strong reductions in herbaceous ground cover as forage, forage substrate, or cover) on migratory bird nest establishment or production performance. However, due to their nest habitat preferences, it is unlikely that current breeding populations of the high interest Brewer's sparrow or green-tailed towhee would change significantly in response to grazing modifications.

Besides growing season deferment and reduction in use duration, the proposed action would reduce overall use intensity in the allotment by about 45%. Improved ground cover development as nesting cover and substrate would be most evident on the 10 or so acres of riparian and

bottomland habitats where, over time, occupation, nest density, and recruitment of such species as Cordilleran flycatcher, MacGillivray's warbler, fox sparrow, and broad-tailed hummingbird would be expected to increase. Increases in ground cover as substrate for nesting and its derivative insect forage base would be expected to enhance nest or brood-rearing conditions for northern harrier and most species within the aspen types, especially the aerial insectivores (e.g., swallows and flycatchers) and perhaps the insectivorous flammulated owl.

Environmental Consequences of the Alternative B (Continuation of Current Management): Current grazing management involves progressive removal of ground cover on about 600 acres of sage-steppe, aspen, and riparian habitats through much of the migratory bird nesting season. Livestock turnout begins in mid-June and continues through the nest season at estimated slight to light (~15-20%) use levels. It is unlikely these grazing practices substantially suppress the abundance or recruitment of breeding bird populations associated with the allotment's aspen and sage-steppe habitats.

By the end of the livestock use period (late October), overall use levels reach moderate to heavy levels (e.g., 55-75%) and little ground cover remains as residual into the following nest season, particularly in favored use areas, such as near water, aspen woodlands, and riparian bottomlands. Although removal of residual herbaceous growth during the dormant period (i.e., little to no opportunity for regrowth) may reduce the availability or suitability of nest sites for ground-nesting birds (e.g., orange-crowned warbler, fox and Lincoln's sparrow) to a small degree, these birds' typically site nests among woody stems or debris (i.e., less accessible to livestock) and begin nesting once green-up has begun (i.e., alternate cover development). Similarly, nesting efforts of high interest migratory birds associated with the allotment's more expansive sage-steppe habitats (Brewer's sparrow, green-tailed towhee) do not seem to be substantially affected by reduced residual cover.

The current state of riparian and associated bottomland habitats from dual elk and cattle use would remain static under this alternative. About 10 acres of bottomland nesting habitat would remain subject to heavy use during the latter half of the growing season and through the fall months. These habitats would continue to be bereft of habitat suitable for nesting by those species associated with well developed herbaceous understories and riparian shrubs (e.g., Cordilleran flycatcher, MacGillivray's warbler, fox sparrow, and broad-tailed hummingbird) and would fail to develop riparian characteristics that could produce inordinate quantities of invertebrate prey for late season fledgling development.

Environmental Consequences of the Alternative C (No Grazing): With no confounding factors, removal of livestock grazing would substantially reduce the removal of herbaceous ground cover across the allotment; influencing breeding bird activity most where past use had modified herbaceous ground cover that is used as nest substrate or provides a direct or indirect source of forage. Substantive gains in breeding bird nest density and reproductive performance would be most prevalent in bottomlands and habitats in close proximity to water or shade (aspen woodlands). Studies where cattle had been removed from riparian and associated shrubland communities in the southwest showed 2 to 3-fold increases in vegetation density that prompted consistent doubling of breeding bird densities in virtually every guild. Consistent with the results of that study, migratory birds nesting in the allotment's expansive shrub-steppe

communities would likely undergo only minor or undetectable increases in response to full herbaceous expression.

Conversely and confounding any beneficial response from livestock removal, denying the permit may aggravate the proliferation of noxious weeds across the allotment (especially ~125 acres of more mesic riparian and aspen communities in the short term). Disallowing a livestock permit would remove any incentive for the current permit holders to continue weed control on the allotment and it is unlikely that the BLM could fully assume this role. Noxious weeds would rapidly dominate understories within these communities and breeding bird populations, particularly ground-nesting species (e.g., MacGillivray's and orange-crowned warblers, fox and Lincoln's sparrow) and aerial insectivores (flycatchers, swallows) would be expected to undergo strong long term declines. Unchecked, these aggressive noxious weeds would proliferate across all habitat types—a situation that would eventually require more aggressive, persistent, and invasive forms of weed control that would increase nest disruption and significantly reduce forage and structure attributable to broadleaf plants (i.e., shrubs and forbs) in the long term.

Mitigation: None.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: Greater sage-grouse, a BLM sensitive species and one of high management concern in northwest Colorado, are distributed across the allotment's mountain big sagebrush communities throughout the year. More mildly sloping ridgelines and upper slopes and basins are widely used for nesting, brood-rearing and winter use functions. Although sagebrush habitats are extensive across the allotment, about half of this acreage is located on slopes with excessive grade. Habitat suitable for sage-grouse is limited to about 201 acres (about 67%) of the Brush Creek pasture and 282 acres (45%) of the Clear Creek pasture.

Sage-grouse begin nesting in mid-April with hatching taking place from late May through early July. Virtually all sage-grouse nests are located beneath sagebrush canopies. Enhanced nest success has been attributed to sites where surrounding herbaceous growth (both previous years residual and new growth) provides cover that supplements sagebrush canopies. Recent evidence suggests that overall reductions in ground cover of up to 35-40% have relatively minor detrimental influence on sage-grouse nesting success in big sagebrush habitats. During the dormant season, these light to light-moderate use levels are thought to leave sufficient residual cover to supplement nest concealment and advantageously modify nest microclimate prior to new ground cover development in the spring. During the growing season, these use levels retain sufficient herbaceous growth between sagebrush crowns to serve as effective hiding cover for young broods and improves prospects for survival and recruitment during this vulnerable period of bird development.

Chicks are able to travel immediately after hatch, fly strongly by 5 weeks (by early August), and become independent of the hen in 10-12 weeks (by early September). Invertebrates and select forbs form the important constituents of sage-grouse diets during the nest and brood periods.

Young grouse and hens are reliant on the availability of succulent forb growth as their primary source of nutrition in late summer and early fall, but sage-grouse are not known to descend into the allotment's deep, narrow drainages to take advantage of their riparian and meadow habitats. The availability and abundance of this forage is largely dependent on the condition of ground cover in upland swales and mesic basins during and after livestock use.

See Aquatic Habitat section for discussion pertaining to the BLM sensitive Colorado River cutthroat trout.

Environmental Consequences of the Proposed Action: The proposed action would substantially reduce livestock influences on the density and height of herbaceous cover (both as aftermath and new growth) prior to and during the sage-grouse nesting and brood-rearing seasons. Livestock use intensity on both pastures would be reduced by about 45%, reducing overall utilization levels attributable to livestock to ~30-35% in the Brush Creek pasture and ~40-45% in the Clear Creek pasture. Livestock use would be confined to dates outside all sage-grouse reproductive functions in the Clear Creek pasture (i.e., turnout in mid-September). Deferral on the Brush Creek pasture would limit grazing use concurrent with the nesting and early brood seasons to 45 days on alternate years at final use levels of about 35%. Allotment-wide reductions in livestock use synchronous with the sage-grouse nest and early brood season (through mid-August) would be about 84%. As proposed, grazing use is not expected to have substantive influence on the utility of herbaceous ground cover for sage-grouse nest and brood-rearing functions.

Growing season use in the Brush Creek pasture would be reduced to 4 weeks beginning 1 July every other year (35% reduction from current) and eliminated in alternate years. There would be no growing season use in the Clear Creek pasture. Duration of use would decline about 65% in the Brush Creek pasture (135 days to 45 days) and about 85% in the Clear Creek pasture (135 days to 20 days). This pattern and intensity of livestock use and the subsequent 50% increase in herbaceous litter accumulation each year should lead to substantive long-term improvements in the composition, density, and persistence of herbaceous ground cover as cover, forage, and invertebrate substrate for sage-grouse hens and broods.

Environmental Consequences of the Alternative B (Continuation of Current Management): Current grazing regimens (beginning in mid-June) reduce herbaceous ground cover during the later nesting season and early brood period (through mid-August) by an estimated 25-35%. These use levels probably have little influence on the effectiveness of new herbaceous growth as supplemental cover for sage-grouse reproductive functions. However, continued grazing use into the dormant season (late October) elevates herbaceous removal to about 60% on the Brush Creek pasture and about 70 % on the Clear Creek pasture. These use levels limit the density and height of residual cover available among or between sagebrush canopies and may have an inhibitory effect on site selection or the early success of grouse nests. Substantial reductions in herbaceous ground cover in the late summer and fall months, particularly in favored livestock use areas, may also be expected to directly or indirectly reduce the late season availability of succulent broadleaf forage.

Environmental Consequences of the Alternative C (No Grazing): With removal of livestock and assuming limited grazing effects by elk, it is expected that the utility of herbaceous nesting cover for sage-grouse would be optimized on about 483 acres in the short term. In the absence of cattle grazing and assuming no significant change in elk use of this allotment, it is probable that grasses would assume an increasingly dominant role in ground cover composition and suppress the abundance and diversity of forbs. Rested pastures at this elevation in Piceance Basin have, on occasion, developed dense grass growth and heavy litter accumulations sufficient to impede free movement of grouse broods, thereby reducing the accessibility, as well as the availability, of broadleaf forbs as an important forage source for nesting hens and late season brood use. An important and confounding factor associated with this alternative is the proliferation and increasing dominance of noxious weeds that would likely attend permit denial (see Migratory Bird, No Action alternative). Sites dominated by noxious weeds have no desirable forage or cover values grouse. More extensive control work that would be necessary to treat large and consolidated weed infestations would involve more extensive and less selective herbicide treatments that would damage or eliminate interspersed shrub and herbaceous components in the long term.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: Greater sage-grouse habitats across the permit area generally meet the Public Land Health Standard, but probably do not represent habitat conditions that are necessary to promote sage-grouse recovery in Piceance Basin. The no-grazing alternative, too, would meet the Land Health Standard in certain respects, but would be expected to culminate in conditions (e.g., weed proliferation and excessive ground cover) counterproductive to sage-grouse recovery. The Proposed Action best meets the intent of the Land Health Standard by reserving sufficient ground cover for sage grouse nest and brood functions and applying sufficient grazing impact to suppress grass dominance in the allotment's sagebrush habitats (i.e., forb availability).

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the Alternative A (Proposed): No hazardous or other solid wastes would be generated under this alternative.

Environmental Consequences of the Alternative B (Current Management): No hazardous or other solid wastes would be generated under this alternative.

Environmental Consequences of the Alternative C (No Grazing): Environmental Consequences of the Alternative B:

Mitigation: The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list, and the White River Resource Area RMP was done to see if any water quality concerns have been identified. The Skinner Ridge allotment (06025) is situated in the Upper Roan Creek watershed (5^{th} level watershed). More specifically, this allotment encompasses portions of the Clear Creek and Brush Creek watersheds (perennial tributaries to Roan Creek) which are positioned in stream segment 14a of the Colorado River Basin. Stream segment 14a of the Colorado River Basin is defined as the mainstem of Roan Creek including all wetlands, tributaries, lakes, and reservoirs, from its source to a point immediately below the confluence with Clear Creek. Segment 14a has not been designated use-protected. An intermediate level of water quality protection applies to waters that have not been designated outstanding waters or use-protected waters. For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review. The state has classified segment 14a as being beneficial for the following uses: Cold aquatic life 1, Recreation 1b, water supply, and Agriculture. It should be noted that Roan Creek is identified on the states Monitoring and Evaluation List (M&E List) for sediment impairments.

Ground Water: Only local ground water located in alluvial/colluvial material in the Clear Creek and Brush Creek drainage bottoms should be affected by the proposed actions.

Environmental Consequences of the Proposed Action: Surface Water: The proposed action calls for deferment of livestock grazing during the critical growing season (June 1 to July 20). The new grazing management plan will result in 54% AUM reduction on the Brush Creek pasture and 56% AUM reduction on the Clear Creek pasture. Successful implementation of the new grazing management plan will result in increased ground cover in the form of litter and live plant material. In addition, the proposed grazing management plan will give deteriorated riparian areas adequate rest from grazing allowing these communities an opportunity to recover to a functional state. By allowing riparian areas to recover to functional levels, stream bank and channel morphology will begin to stabilize, protecting water quality by keeping the balance between sediment supply and flow rates.

Ground Water: By establishing proper functioning riparian communities and allowing natural stream channel, bank, and floodplain development, storage capacity of local ground water in floodplains (alluvial/colluvial material) will increase. Increased storage of ground water in

localized alluvial/colluvial aquifers will aid in maintaining base flows to Clear Creek and Brush Creek.

Environmental Consequences of the Alternative B: Surface Water: Continuation of current management will not allow adequate rest from grazing in riparian areas or upland watersheds. Over grazing riparian areas decreased stream bank and channel stability which increases erosion rates deteriorating water quality down stream. Lack of adequate rest from grazing in the uplands will decrease the effective ground cover exposing soils to erosional processes, increase hill slope erosion, and elevate sedimentation rates to stream channels below. Adverse impacts to surface water quality would be significantly greater under alternative B that under the proposed action (Alternative A).

Ground Water: Lack of functional riparian communities combined with degraded stream channel, bank, and floodplain morphologic conditions (e.g. disconnected floodplains) will prevent adequate storage of ground water in alluvial/colluvial aquifers. Lack of sufficient ground water storage in the alluvial/colluvial aquifers of Clear Creek and Brush Creek will minimize ground water contributions to surface water during base flow conditions.

Environmental Consequences of the Alternative C: No adverse environmental impacts to surface or ground water will result from Alternative C.

Mitigation: Successful implementation of the proposed action (Alternative A) should allow adequate rest from grazing in riparian areas and in the uplands. Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*. In addition, monitoring of stream channel morphology (Rosgen survey data) will be essential to evaluate the impacts of livestock/wildlife within the allotment boundaries. Furthermore, continuation of riparian assessments in Clear Creek and Brush Creek will be necessary to evaluate success of the new grazing management plan (Alternative A). Planting of desirable riparian species (e.g. willows) may be necessary to increase stream bank stability in affected areas.

Finding on the Public Land Health Standard for water quality: Water quality within the allotment boundary is currently meeting standards. Ephemeral tributaries to Clear Creek and Brush Creek may not meet water quality standards during periods of flow. However, implementation of the proposed grazing management plan should improve the health of riparian areas and upland vegetation improving water quality from current conditions.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: Both the Clear Creek and Brush Creek riparian areas have been degraded by long term continuous summer long livestock use. The Brush Creek part of the Skinner Ridge allotment is a narrow, shallow incised system on a solid rock shale substrate with a year round flow. The Clear Creek part of the Skinner Ridge allotment is a moderately narrow, deeply incised system with a year round flow. Both systems have a moderate gradient.

Environmental Consequences of the Proposed Action: The proposed changes in both the timing and intensity of livestock grazing use can be expected to result in rapid improvement in the vegetation cover and production and thus, function of both the Clear Creek and Brush Creek riparian areas.

Environmental Consequences of the Alternative B: Under the continuation of current management scenario, the Clear Creek riparian area would continue to improve because interim management has created a distinct riparian pasture with a fall grazing regime. Brush Creek would not improve appreciably because the riparian area would continue to receive summer long grazing use.

Environmental Consequences of the Alternative C: Under the no grazing scenario there would be no livestock impact on the riparian areas; however, there would likely also be *no* noxious weed management, so houndstongue would preempt the dominance of native plant species in both riparian areas.

Mitigation: In addition, in order to return the Clear Creek riparian areas to proper functioning condition livestock grazing use of the Clear Creek pasture will be limited to 20 days in the fall *or* until utilization of herbaceous riparian/floodplain vegetation to a 4" stubble height is reached. Rangeland monitoring studies

Finding on the Public Land Health Standard for riparian systems: The Brush Creek and Clear Creek riparian areas within the Skinner Ridge allotment do not meet the Standard (i.e. are not in Proper Functioning Condition). Management changes have been initiated that will improve their condition and they will reach proper functioning condition over the long term.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: The Skinner Ridge allotment soils were inventoried in the Douglas Plateau soil survey published in 2002. The following table lists soil map unit acreage for BLM lands and the corresponding ecological site for the allotment pastures.

Pasture	SOIL UNIT	Ecological site	ACRES
Brush Creek	Parachute-Irigul complex,5-30%slopes	Mountain Loam/Loamy Slopes	78.255
Brush Creek	Parachute-Irigul-Rhone assoc,25-50%slopes	Brushy Loam/Brushy Loam/Loamy Slopes	212.842
Brush Creek	Rentsac channery loam,5-50%slopes	Pinyon Juniper woodlands	8.157
		Totals	**299.254**

Pasture	SOIL UNIT	Ecological site	ACRES
Ducey	Parachute-Irigul-Rhone assoc,25-50%slopes	Brushy Loam/Brushy Loam/Loamy Slopes	2.591
Ducey	Parachute-Irigul complex,5-30%slopes	Mountain Loam/Loamy Slopes	8.320
Ducey	Northwater-Adel complex,5-50%slopes	Quaking Aspen	1.053
		Totals	**11.964**

Pasture	SOIL UNIT	Ecological site	ACRES
Clear Creek	Parachute-Irigul-Rhone assoc,25-50%slopes	Brushy Loam/Brushy Loam/Loamy Slopes	403.902
Clear Creek	Parachute-Irigul complex,5-30%slopes	Mountain Loam/Loamy Slopes	97.123
Clear Creek	Northwater-Adel complex,5-50%slopes	Quaking Aspen	125.336
		Totals	**626.361**

Environmental Consequences of the Proposed Action: Under the proposed action surface litter, canopy cover and ground cover would increase on both the mid seral and early seral rangelands as a result of critical growing season rest and a reduction in stocking. The rest and regrowth opportunities as a result of more intensively managed livestock grazing are expected to increase the cover and production of native perennial grasses that are important for soil protection on these sites.

Environmental Consequences of the Alternative B (Continuation of current management): Under current management there would be no change in the condition of soils occupied by early seral and mid seral plant communities. On the early seral sites associated with the Clear Creek and Brush Creek drainages there would be insufficient vegetation and litter cover for proper soil protection and function.

Environmental Consequences of the Alternative C (No grazing): Under a no grazing scenario, both early and mid seral sites would experience an increase in both vegetation and soil surface litter cover; however, on the early seral sites this increase would be limited by a corresponding increase in the cover of houndstongue because there would be little or no noxious

weed control. It is expected that the early seral sites would continue to not meet the Colorado Standard for upland soils.

Mitigation: Continue monitoring key areas and establish at least one Daubenmire canopy coverage transect.

Finding on the Public Land Health Standard for upland soils: The soils that are occupied by mid seral plant communities (see Vegetation section below) have sufficient cover of native plant species and are producing sufficient ground cover that accelerated runoff is at a minimum. These soils are meeting the Colorado Standard for upland soils. 15 acres of soils occupied by the early seral mountain loam/loamy slopes plant communities in the Clear Creek and Brush Creek drainages do not have sufficient diversity or amount of native plant species to provide enough ground cover to prevent accelerated runoff. These soils correspond with the non- proper functioning condition riparian areas. Although these soils have little or no soil pedestaling or rills occurring, they nevertheless are not meeting the Colorado Standard for upland soils.

VEGETATION AND RANGELAND MANAGEMENT (includes a finding on Standard 3)

Affected Environment: The following table lists the plant community appearance for each of the ecological sites or woodland types on the allotment along with the predominant plant species comprising the composition of each community. Forb species, though important to the diversity of a community and comprising up to 25 to 30% of the composition of several of the plant communities listed, are not presented in the following table because they generally are not significant contributors to the general appearance of the community.

Ecological Site/ Woodland Type	Plant Community Appearance	Predominant Plant Species in Plant Community
Brushy Loam	Deciduous Shrub/grass Shrubland	Serviceberry, oakbrush, snowberry, nodding brome, sedge, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
Loamy Slopes	Mix Shrub/grass Shrubland	Mountain mahogany, bitterbrush, Utah serviceberry, mountain big sagebrush, Letterman needlegrass, beardless bluebunch wheatgrass, sedge, western wheatgrass, junegrass, Indian ricegrass
Mountain Loam	Grass/Open Shrub Shrubland	Polyanthus brome, nodding brome, slender wheatgrass, bearded wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, low rabbitbrush, snowberry, serviceberry
Quaking Aspen	Woodland	Utah serviceberry, snowberry, mountain big sagebrush, bearded wheatgrass, onion grass, polyanthus brome, nodding brome, Letterman and Columbia needlegrass, blue wildrye, sedges.
Pinyon- Juniper	Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush rock spirea, Utah serviceberry, mountain big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, j indian ricegrass, mutton grass

The following table shows the seral rating system used by BLM to rate rangeland plant

communities in comparison to the potential natural plant community for a particular rangeland site.

ECOLOGICAL SITE SIMILARITY RATINGS	
Seral Rating	**% Similarity to the Potential Natural Plant Community (PNC)**
Potential Natural community (PNC)	76-100% composition of species in the PNC
Late-Seral	51-75% composition of species in the PNC
Mid-Seral	26-50% composition of species in the PNC
Early-Seral	0-25% composition of species in the PNC

The following tables show an estimate of the public land acreage falling within one of the seral ratings for each ecological site on each allotment. These estimates are based upon professional judgments of the Rangeland Management Specialist trained in the use of the rating system. Nearly all ecological sites were visited during the field seasons of 2003- 2004 for a plant community assessment of the Colorado Public Land Health Standards for each allotment.

06025 SKINNER RIDGE ALLOTMENT Ecological Site Similarity Ratings						
ECOLOGICAL SITE	**Total BLM Ac. In Allot.**	**PNC**	**Late-Seral**	**Mid-Seral**	**Early-Seral**	**BLM Ac. Classified**
Mountain Loam/Loamy Slopes	184	0	0	169	15	184
Brushy Loam/Brushy Loam/Loamy Slopes	619	0	0	619	0	619
Quaking Aspen	126	0	0	126	0	126
Pinyon-Juniper Woodland	8	0	0	0	0	0
Total	937	0	0			929
% BLM Ac Classified	937	0%	0%	914	15	99%

Skinner Ridge Allotment/ Pasture Livestock Grazing Capacity

Allotment Number.	Pasture Name	Ownership	Ecological site	ACRES	Acres/AUM	AUMS
06025	Brush Creek	BLM	Mountain Loam/Loamy Slopes	78.255	4	20
06025	Brush Creek	BLM	Brushy Loam/Brushy Loam/Loamy Slopes	212.842	7	30
06025	Brush Creek	BLM	Pinyon Juniper woodlands	8.157	14	0
			BLM Totals	**299.254**		50
Allotment Number.	**Pasture Name**	**Ownership**	**Ecological site**	**ACRES**	**Acres/AUM**	**AUMS**
06025	Brush Creek	PRI	Mountain Loam/Loamy Slopes	48.365	4	12
06025	Brush Creek	PRI	Brushy Loam/Brushy Loam/Loamy Slopes	188.603	6	31

Allotment Number.	Pasture Name	Ownership	Ecological site	ACRES	Acres/AUM	AUMS
06025	Brush Creek	PRI	Pinyon Juniper woodlands	0.390	4	0
06025	Brush Creek	PRI	Brushy Loam	9.997	6	1
			Private Totals	**247.355**		44
			Brush Creek Pasture Totals	**546.609**		**94**
Allotment Number.	**Pasture Name**	**Ownership**	**Ecological site**	**ACRES**	**Acres/AUM**	**AUMS**
06025	Ducey	BLM	Brushy Loam/Brushy Loam/Loamy Slopes	2.591	7	0
06025	Ducey	BLM	Mountain Loam/Loamy Slopes	8.320	4	2
06025	Ducey	BLM	Quaking Aspen	1.053	3	0
			BLM Totals	**11.964**		**2**
Allotment Number.	**Pasture Name**	**Ownership**	**Ecological site**	**ACRES**	**Acres/AUM**	**AUMS**
06025	Ducey	PRI	Quaking Aspen	65.474	3	22
06025	Ducey	PRI	Brushy Loam/Brushy Loam/Loamy Slopes	221.744	6	37
06025	Ducey	PRI	Mountain Loam/Loamy Slopes	94.809	4	24
			Private Totals	**382.027**		83
			Ducey Pasture Totals	**393.991**		**85**
Allotment Number.	**Pasture Name**	**Ownership**	**Ecological site**	**ACRES**	**Acres/AUM**	**AUMS**
06025	Clear Creek	BLM	Brushy Loam/Brushy Loam/Loamy Slopes	403.902		
06025	Clear Creek	BLM	Mountain Loam/Loamy Slopes	97.123		
06025	Clear Creek	BLM	Quaking Aspen	125.336		
			BLM Totals	**626.361**		**71**
Allotment Number.	**Pasture Name**	**Ownership**	**Ecological site**	**ACRES**	**Acres / AUM**	**AUMS**
06025	Clear Creek	PRI	Brushy Loam/Brushy Loam/Loamy Slopes	1.352		
06025	Clear Creek	PRI	Mountain Loam/Loamy Slopes	3.316		
			Private Totals	**4.668**		0
			Clear Creek Pasture Totals	**631.029**		**71**
			BLM Total	**937**		**121**
			SKINNER RIDGE ALLOTMENT TOTAL	**1571.629**		**300**

Environmental Consequences of the Proposed Action: The proposed grazing management system would shorten the duration of grazing use and decrease the intensity of use on both the Clear Creek and Brush Creek pastures. Reducing the length of the grazing period and the stocking rate in both pastures would reduce the potential for repeat defoliation of forage plants, thereby resulting in an increase in their vigor, cover and production. The mid seral

ecological sites (uplands) would show the most rapid initial improvement, particularly in the Clear Creek pasture where there would be virtually no growing season use. The early seral sites in Clear Creek and Brush Creek would be slower to respond but could be expected to make the most dramatic change over the long term due to the change in grazing management and houndstongue control.

Environmental Consequences of the Alternative B: Under this alternative, no livestock grazing, there would likely be a long term decline in all plant communities on the allotment. The principal cause of this decline would be proliferation of the noxious weed houndstongue due to the absence of noxious weed management. Houndstongue would dominate the riparian areas initially and then gradually increase on the upland plant communities.

Environmental Consequences of the Alternative C: Under this alternative, continuation of current management, plant communities on the uplands would remain in static condition, although houndstongue treatment would continue to have a positive effect by reducing this invasive species. The vegetation in the Brush Creek and Clear Creek riparian areas would continue to be negatively impacted by heavy livestock use resulting in a lack of desirable plant species and residual cover, both of which are necessary for site conservation.

Mitigation: Continue rangeland monitoring studies.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* With the exceptions noted, plant communities within the allotment meet the Standards. Under the proposed action we expect plant communities within the allotment to improve in ecological condition in both the short and the long term and thus, their ability to meet the Standards in the future will be enhanced.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Those reaches of Brush and Clear Creek within the allotment contribute directly to recovery waters for BLM sensitive Colorado River cutthroat trout, but neither of the channels themselves are inhabited. The allotment's lower 1000 feet of Brush Creek, a properly functioning willow-dominated channel, provides suitable fisheries habitat, but lies upstream of a series of rock falls that effectively precludes fish passage. Similarly, the upper 1000 feet of the Brush Creek channel is segregated from the lower reach by a large fall. Clear Creek does not support flow or channel conditions appropriate for a fishery, but stream surveys in the mid-1970s indicated an intact macroinvertebrate community. Based on recent surveys, decline in channel condition over the intervening years has apparently led to strong reductions in the abundance and diversity of aquatic insects in this reach.

Environmental Consequences of the Proposed Action: Proposed reductions in the duration of use, growing season deferment, and reduced overall use intensity should prompt substantial improvements in riparian expression and channel morphology in Clear Creek and the upper portion of Brush Creek in the short term. Abbreviated livestock use and the stubble height provision should allow sufficient residual and/or regrowth opportunity (alternate years in Brush

Creek) to take advantage of spring runoff flows, and full growing season expression (each year in Clear Creek, alternate years in Brush Creek) would effectively capture sediments generated from late summer thunderstorm events. It is expected that these features would result in rapid increases in the density and residual height of herbaceous bank cover and promote shifts in community composition toward more erosion-resistant obligate forms. In response to increasingly effective floodplain function and vegetation armoring, width: depth ratios should decrease along 5000' of channel--a response that would improve the quality of aquatic habitat for invertebrate forms by increasing stream depth, decreasing water temperature, and enhancing the structural diversity of the channel. Channel and floodplain stability generated by grazing modifications may be expected to predispose these channels to willow establishment and the heightened availability of herbaceous forage across the allotment should be sufficient to deter substantive use of woody forages by cattle in the later summer months.

Ultimately, restoring proper functioning condition to those non-functional or at-risk channel segments within the allotment would reduce sediment delivery, prolong base flows, and provide stable sources for the downstream dissemination of both obligate plants and macroinvertebrates to downstream cutthroat trout fisheries. Reductions in overall use should also promote increased accumulation of litter in the uplands that, over time, would incrementally enhance infiltration and prolong base flow delivery to the channels and downstream fisheries.

Environmental Consequences of Alternative B (Continuation of Current Management): Under current authorizations, no substantive progress in channel recovery would be expected and it is likely that episodes of heavy runoff would prompt continued channel and bank degradation with adverse consequences extending upstream (i.e., bed and bank instability from downcutting events) and downstream (i.e., excessive sediment delivery, abbreviated base flow contributions to downstream fisheries).

Environmental Consequences of Alternative C (No Grazing): With no confounding factors, removal of livestock would maximize the rate of channel recovery and appurtenant benefits of optimally functioning channel systems, including reduced sediment delivery, prolonged base flows, and stable sources for the downstream dissemination of both obligate plants and macroinvertebrates to downstream cutthroat trout fisheries. However, with permit denial and no incentive to treat infestations by a livestock permittee (see Migratory Bird, No Action alternative), it is likely that noxious weeds (primarily houndstongue) would proliferate and rapidly dominate vegetation communities along these channels. Weed dominance would negate any progress in vegetation-derived channel stability and would lead to progressive deterioration of channel conditions for macroinvertebrate production.

Mitigation: Pending staff and funding, WRFO wildlife staff will continue to collect and analyze macroinvertebrate samples to track aquatic community response to grazing modifications (i.e., abundance and composition).

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): With the exception of 1000 feet of Brush Creek that have remained relatively free of grazing-related influences, those portions of Clear and Brush Creeks encompassed by the allotment fail to meet the Land Health Standard for aquatic communities

and contribute to the degradation of downstream cutthroat fisheries. Implementation of the proposed action should prompt marked increases in riparian vegetation expression, community composition, and channel stability and make substantial progress in achieving proper functioning condition over the term of the permit. Barring complications concerning noxious weeds, the no grazing alternative, too, would promote channel development and rejuvenation processes that would achieve the Land Health Standard.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: This high elevation allotment is used exclusively by deer and elk as summer range with occupation extending from May through November. Although big game and cattle use is largely synchronous and localized utilization rates in mutually favored sites (e.g., margins of aspen woodlands) relatively high, there are no widespread or severe instances of livestock–big game forage conflicts and the availability and variety of favored upland forages appears adequate. Aspen reproduction is sufficiently prevalent to indicate that herbaceous forage supplies are adequate and cattle and elk do not resort prematurely to woody forages in the later summer and fall months. Although the allotment's confined, high gradient valleys represent very little acreage (less than 1% of allotment), the potential availability of succulent late season forages derived from riparian or bottomland sites has been strongly reduced by past grazing practices. Although these effects are likely subtle and incremental, use of succulent forages late in the summer help sustain the nutritional plane of lactating dams, as well as dependent young (especially in the case of deer) prior to the onset of winter.

Blue grouse occur seasonally (April through November), fulfilling nesting and brood-rearing activities in close association with the allotment's aspen and mesic channel inclusions.

These higher elevation habitats support an assemblage of nongame birds and mammals typical of the region's mountain big sagebrush and aspen communities. These nongame populations are generally well distributed and occur at appropriate densities in their respective habitats. The notable exception involves BLM-administered reaches of Clear Creek (~4000 linear feet) and about half of the Brush Creek reach (~1000 linear feet), which are over widened, their floodplains generally barren, and support little ground or shrub cover on adjacent terraces (collectively, about 10 acres) for reproductive-season or over-winter use by nongame birds or mammals. Although populations of bird and small mammals associated with these limited habitats persist (e.g., Cordilleran flycatcher, fox sparrow, water shrew, long-tailed vole), they likely appear at densities well below potential.

Environmental Consequences of the Proposed Action: Continued light to moderate use of herbaceous ground cover by livestock, particularly with their deferred entry as bunchgrass growth begins to mature, would prolong the utility of bunchgrass forage for deer, provide sites for enhanced forb expression (i.e., reduced grass competition) as an important forage source for deer, blue grouse, and non-game birds and mammals, and increase residual ground cover, which would, over time, be expected to help prolong the persistence and availability of nutritious broadleaf forages. Channel recovery attributable to this alternative would provide ground cover sufficient to support a cover and forage base for those nongame species requiring denser or better

developed understory conditions (see discussions in Migratory Birds, blue grouse effects would be similar to those discussed for sage-grouse in T&E Animals)..

Environmental Consequences of the Alternative B (Continuation of Current Management): There would be little stimulus for change in the condition or trend of terrestrial habitat conditions under the current grazing regimen. In particular, there would be little if any change in the channel recovery potential of Clear and Brush Creeks and those derived values (i.e., important forage and cover source for big game, blue grouse, and non-game species) would continue to be foregone.

Environmental Consequences of the Alternative C (No Grazing): In the absence of cattle grazing and assuming no significant change in elk use of this allotment, it is probable that grasses would assume an increasingly dominant role in ground cover composition and may be expected to ultimately suppress the abundance, diversity, or accessibility of forbs as important nutritional constituents of blue grouse and deer diets (see also pertinent discussion in T&E Animal section for grouse). Similarly, significant declines in grass utilization would fail to provide widespread conditioning of bunchgrasses (i.e., increasing accessibility of succulent regrowth by deer), and it is likely that the utility of bunchgrasses as a seasonal forage component of deer would decline.

Although removal of livestock would ostensibly maximize the rate of channel recovery and the associated development of bottomland habitats for big game, blue grouse, and non-game species (see Migratory Bird section for discussion), this option is confounded by the presence and continued need of noxious weed treatment (see discussions in previous wildlife sections).

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): With the exception of about 10 acres of riparian and bottomland habitat, and localized weed infestations, the allotment's terrestrial habitats generally meet the Land Health Standard. Modifications in livestock grazing attributable to the proposed action would maintain desirable habitat conditions across the uplands and help redevelop functional bottomland habitats, thereby better fulfilling the intent of the standard. The no-grazing alternative would likely change the character and utility of the landscape for current wildlife uses, but barring complications concerning noxious weeds, it , too, would achieve the Land Health Standard.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fire Management	X		
Forest Management			X
Geology and Minerals		X	
Hydrology/Water Rights			X
Law Enforcement	X		
Noise	X		
Paleontology		X	
Realty Authorizations		X	
Recreation		X	
Socio-Economics		X	
Visual Resources		X	
Wild Horses	X		

FOREST MANAGEMENT

Affected Environment: The following table lists the forest and woodland types on the allotment.

Allotment Name	Woodland P-J Acres	Aspen Acres (Brushy Loam)
Skinner Ridge	8	126

Within the current land use plan all of the pinyon/juniper woodlands in the Skinner Ridge allotment are classified as non-commercial based on productivity and harvest suitability. These woodlands are not considered in the decadal harvest for the White River Field Office and will not be managed for commercial firewood production. Woodlands in this geographic reference area are available for harvest by private individuals. The Pinyon/Juniper community is limited on this allotment (8 acres), but is available for harvesting of fuel wood and fence posts

Aspen forests are classified as non-commercial based on their limited range and importance to plant community diversity. Limited harvest of firewood and transplants is allowed. No harvest is known to currently occur. Overall aspen communities are decreasing in range in Colorado. The current land use plan identifies aspen as being available for treatment to maintain and enhance these stands and achieve the desired plant community. Any aspen treatments would be analyzed in activity plans. The aspen stands in the Skinner Ridge allotment are mature stands with limited reproduction. Grazing by livestock and wildlife has been shown to decrease or eliminate reproduction. At such time as these stands start to die out, there is expected to be a need to restore the individual stands. This would require treatment of the individual stands followed by fencing to prevent grazing by livestock and wildlife. Fencing would be required until saplings are large enough to survive browsing which is estimated at five years.

Environmental Consequences of the Proposed Action: On this allotment pinyon/juniper stands are relegated to the areas of steep slopes and shallow soils. Livestock grazing in general has not been shown to adversely impact existing pinyon/juniper woodlands.

The proposed grazing program is expected to decrease grazing use within some of the aspen stands. This may allow for limited sprouting of aspen. The impacts of elk on saplings can not be

managed for and may prevent reproduction in these stands. In the event that treatments are required to restore aspen communities, an activity plan and environmental assessment would be prepared. Stands would be inventoried and prioritized for treatment. Treatment is not expected to involve more than 10 acres of aspen at any one time. Treatment of aspen is also expected to allow for development of more productive grass/forb communities under the aspen and increase the competition against noxious weed invasion.

Environmental Consequences of the Continuation of Current Management Alternative: No changes are expected in the pinyon/juniper community.

Livestock grazing impacts combined with elk use would continue to limit reproduction within aspen stands. There remains the opportunity to treat aspen stands as described above, although elk use of fenced areas is expected to be greater because of improved forage quantity and quality of the fenced areas. Aspen reproduction within the fenced areas would be less successful than the preferred management alternative

Environmental Consequences of the No Grazing Alternative: No changes are expected in the pinyon/juniper community.

Reproduction within aspen stands is expected to increase significantly. The need for fencing of aspen stands would not be required.

Mitigation: None

HYDROLOGY AND WATER RIGHTS

Affected Environment: The majority of the White River Field Office (WRFO) area was inventoried in the early 1980's for springs. The following table lists springs which were identified in the WRFO Water Atlas for the assessment area.

Map Code	¼ Section	Section	Twp	Rng	Water Right	SC	pH	Q (gpm)	Date	Comments
183-09	SESW	31	4S	99W	85CW542	858	8.1	18.46	8/1/83	Perennial
183-10	NWSW	31	4S	99W	85CW542	695	8.5	4.23	8/1/83	Perennial

The BLM has obtained water rights on all of the identified perennial springs. Typically water rights are not granted on springs that do not maintain a perennial flow. Additional monitoring will be necessary to assess the functionality of existing spring developments and address the need for repair at specified locations.

Environmental Consequences of the Proposed Action: Livestock tend to congregate near perennial water sources deteriorating stream channel morphology and significantly reducing riparian vegetation. Reduced riparian vigor and damage to functional stream channels/banks increases channel incision and stream bank erosive potential. However, with the proposed changes in the grazing schedule (rest from grazing during the critical growing season) livestock grazing impacts on spring sources and stream banks should be limited.

Environmental Consequences of the Alternative B: Continuation of current grazing practices will limit the productivity of necessary riparian vegetation at spring sources and along stream banks. Deteriorations to riparian vegetation in these locations will adversely impact water quality (sediment, nutrients…), water quantity (loss of functional floodplains decreases the systems storage capacity), and stream channel morphology (cattle congregating along channel banks will destroy functional morphologic channel conditions).

Environmental Consequences of the Alternative C: No adverse environmental impacts will result from alternative C.

Mitigation: Spring developments must be maintained and all non-functional items (e.g. old water troughs, pipes, fence, etc…) must be removed and properly disposed of by the permit holder. Perennial water sources showing signs of adverse impacts due to livestock/wildlife should be fenced to allow the system to recover. Spring monitoring must continue to evaluate the functionality of developments, assess water quality at spring sources, and maintain current water rights.

CUMULATIVE IMPACTS SUMMARY: This permit renewal will have a positive cumulative impact on the affected rangelands because, with tenure, the permittee will have an incentive to provide an increased level of stewardship on the allotments addressed in this document.

PERSONS / AGENCIES CONSULTED: Alan Ducey, Dee and Vicky Norell

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality, Water Quality, Surface and Ground Hydrology and Water Rights
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species
Gabrielle Elliott	Archaeologist	Cultural Resources, Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species, Wetlands and Riparian Zones, Soils, Vegetation, Rangeland Management
Ed Hollowed	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife
Melissa J. Kindall	Collateral Hazmat	Wastes, Hazardous or Solid
Chris Ham	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation, Visual Resources
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Penny Brown	Realty Specialist	Realty Authorizations

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2005-019-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to implement the proposed action to renew grazing permits #051423 and # 0500037for a period of ten years and to approve the allotment management plan for the Skinner Ridge allotment as described in the proposed action, including the mitigation proposed below.

The proposed grazing plan will provide a period of rest from livestock use during the critical growing period, thereby improving plant cover and production on upland rangelands. In addition, the timing and periods of use in both the Clear Creek and Brush Creek pastures have been set up to accelerate riparian improvement in both drainages. The fall grazing use period for the Clear Creek pasture will be maintained at least until Clear Creek reaches proper functioning condition. Adjustments may be made in the grazing plan to insure that both the Standards for Rangeland Health and the White River ROD/RMP objectives are met or exceeded. The proposed action offers the most viable option for meeting or exceeding the Standards for Rangeland Health and the vegetation management objectives in the White River ROD/RMP.

MITIGATION MEASURES:

1. The operator is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places
- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- A timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

3. Continue the cooperative effort to control/reduce houndstongue on the Skinner Ridge allotment.

4. The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

5. Successful implementation of the proposed action (Alternative A) should allow adequate rest from grazing in riparian areas and in the uplands. Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*. In addition, monitoring of stream channel morphology (Rosgen survey data) will be essential to evaluate the impacts of livestock/wildlife within the allotment boundaries. Furthermore, continuation of riparian assessments in Clear Creek and Brush Creek will be necessary to evaluate success of the new grazing management plan (Alternative A). Planting of desirable riparian species (e.g. willows) may be necessary to increase stream bank stability in affected areas.

6. In order to return the Clear Creek riparian area to proper functioning condition livestock grazing use of the Clear Creek pasture will be limited to 20 days in the fall *or* until utilization of herbaceous riparian/floodplain vegetation to a 4" stubble height is reached. Rangeland monitoring studies

7. Continue monitoring key areas and establish at least one Daubenmire canopy coverage transect and rangeland monitoring studies.

8. Pending staff and funding, WRFO wildlife staff will continue to collect and analyze macroinvertebrate samples to track aquatic community response to grazing modifications (i.e., abundance and composition).

9. Spring developments must be maintained and all non-functional items (e.g. old water troughs, pipes, fence, etc…) must be removed and properly disposed of by the permit holder. Perennial water sources showing signs of adverse impacts due to livestock/wildlife should be fenced to

allow the system to recover. Spring monitoring must continue to evaluate the functionality of developments, assess water quality at spring sources, and maintain current water rights.

COMPLIANCE/MONITORING: Skinner Ridge allotment rangeland monitoring studies.

NAME OF PREPARER: Mark Hafkenschiel

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: Kent E. Walter
Field Manager

DATE SIGNED 04/03/06

ATTACHMENTS: Location map of the Proposed Action

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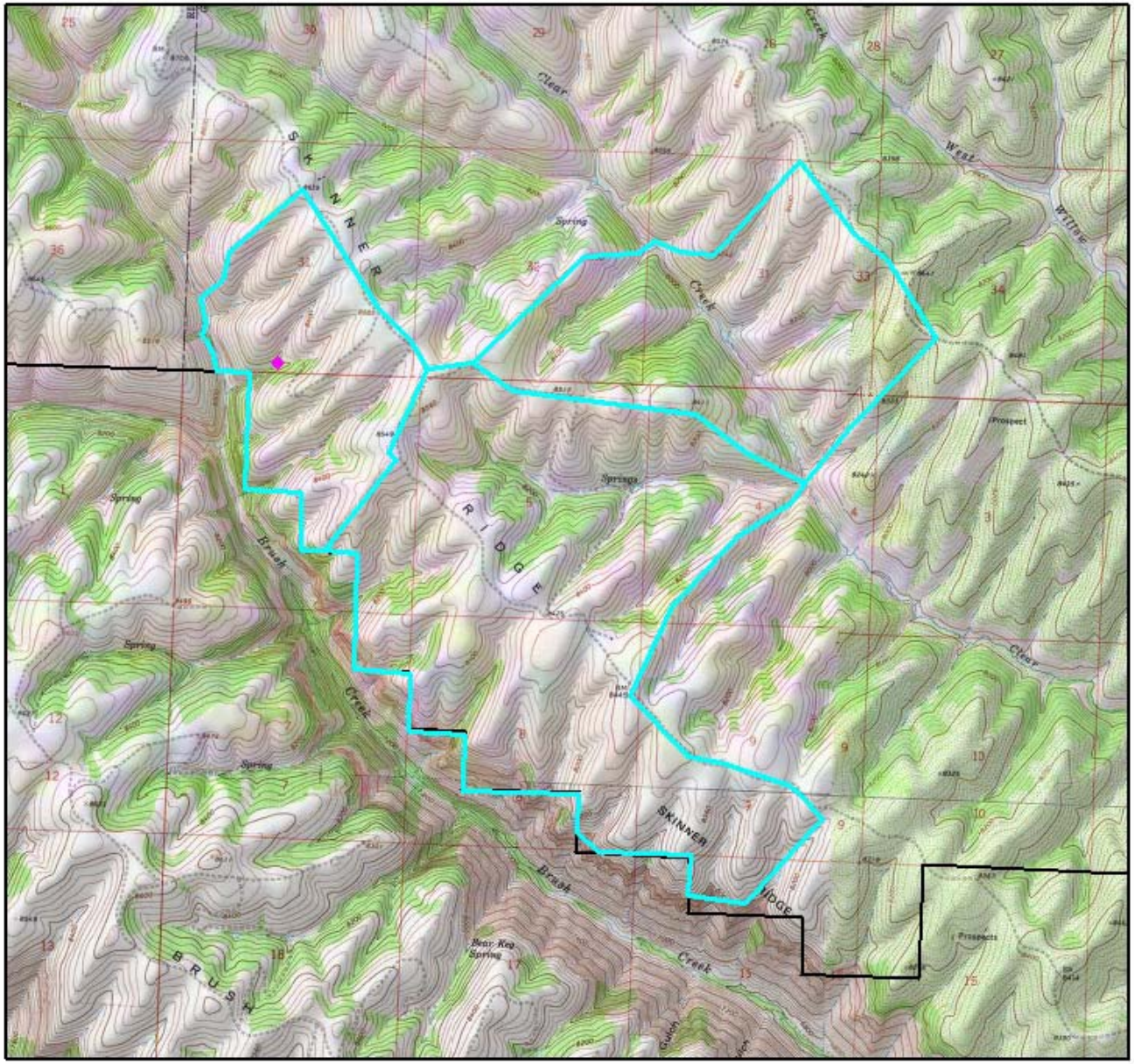

Projects: polygon
Projects: line
Projects: point
Field office boundary

N

0 20 40 80
Miles

3/22/2006